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10/660,639	09/12/2003	Masayuki Yoshida	01272.020631.	7109

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EXAMINER	
DICKERSON, CHAD S	

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2625	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/660,639	YOSHIDA, MASAYUKI	
	Examiner	Art Unit	
	CHAD DICKERSON	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 August 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20,21,24,25,28,29 and 32-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *20,21,24,25,28,29 and 32-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 6-10, filed 8/26/2009, with respect to the 112 1st paragraph rejections have been fully considered and are persuasive. The 112 1st paragraph rejections of claims 20, 21 and 32 have been withdrawn.

2. Applicant's arguments filed 8/26/2009 have been fully considered but they are not persuasive. The addition of the phrase of "wherein the steps are performed by a document printing system" does not clearly convey that the steps above the phrase in claim 24 cannot be performed by a human being with mental steps, pencil and paper. A broad interpretation of claim 24 can lend itself to an interpretation that a human being is able to perform the claimed steps with a few tools (i.e. logical reasoning to calculate font sizes with a scaling factor and an expansion ratio, pencils and paper). Therefore, the rejection of the claim is maintained. It is suggested that the claim include the actual units in claim 20 incorporated in claim 24.

3. Applicant's arguments, see page 13, filed 8/26/2009, with respect to the rejection(s) of claim(s) 20, 21, 24, 25, 28, 29 and 32-34 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Yoshidfa '634. The Examiner has decided to apply the Yoshida '634 reference in place of the Sakurai '350 reference in order to more clearly demonstrate the obviousness of the claimed invention through the current broad claims. When looking at the Applicant's invention, the Examiner simply thought of the question regarding the actual

determination of character weight. The Examiner's answer came from the study of character weight in different references. Conventionally, the weight of a character is determined by the thickness of a character within one character size (i.e. 8pt). This can be seen in the different types of information filed on 8/26/2009 by the Applicant since this information shows on the Font Gallery exhibit the higher weight of a character that is within the same font size. The Examiner believes that a 36pt font with a weight of 5 has more weight than an 8pt font with the same weight of 5. However, the Examiner believes that the acquired reference of Yoshida performs the above feature of having fonts of different weight that can be considered as the thinnest or thickest out of other comparable weights within one font size.

The newly applied Yoshida '634 reference uses a weight convention that measures the thickness of characters. In the Yoshida reference, the user is able to designate a certain weight and the system checks to see if this weight is equal to a weight that is present in the system. In figure 22, the user designates a weight in the system and if this weight is present, then the font type, or typeface, and weight present in the system is selected without changing the weight of the font specified by the system[1]. However, if the weight present in the system is smaller than the weight requested, the system selects the font with the thinnest weight in figure 23A in the specified typeface. For example, when viewing figure 23A, the user may designate a Ming character having a standard (4) thickness. However, the system only contains standard-thin and very thick. The system will then choose standard-thin, which is the

[1] See Yoshida '634 at col. 10, ll. 59 – col. 12, ll. 3.

thinnest weight present in the Ming category, and use this to adjust the presently stored character to the desired character weight. Next, an enlarging or reduction process is performed on the presently stored font in order to reach the designated font. Thus, the feature of choosing the font with the thinnest weight is disclosed.

In addition, the system of Yoshida chooses a certain font style regardless of the specified choice of the user if the font style chosen by the user is not present in the system. The system makes the selection of another style, or typeface, within the font and performs the automatic process of thickening or thinning the font in order to reach the user designated font[2]. Therefore, the above feature discloses the feature of selecting a typeface regardless of the specified typeface of the user.

Therefore, with the above explanation, claim 20 is rejected with the newly applied reference while the rest of the rejection is maintained with the previously applied references.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 24, 25 and 33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 24 is rejected as not falling

[2] Id.

within one of the four statutory categories of invention. Supreme Court precedent[3] and recent Federal Circuit decisions[4] indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim recites a series of steps or acts to be performed, the claim neither transforms underlying subject matter nor is positively tied to another statutory category that accomplishes the claimed method steps, and therefore does not qualify as a statutory process. For example, the document printing method including the steps of calculating, deciding, making adjustments and selecting is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine. The Applicant has provided no explicit and deliberate definitions of "calculating", "making adjustments", or "selecting" to limit the steps to the electronic processing format of the "document printing method," and the claim language itself is sufficiently broad to read on a person calculating a font size based on a scaling factor that was developed when taking the output area into account, deciding whether the font size is smaller than a minimum font size that the person is thinking of, calculating an expansion ratio in the person's mind when the individual decides that the font size calculated is smaller than the minimum font size in one's mind, adjusting the output area into a plurality of pages based on the expansion ratio thought of by increasing the size of drawn fonts in one's mind or on a physical piece of paper so that the images extend to more than one sheet because of the increased font size and lastly,

[3] *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk*

selecting fonts that the user has in his or her mind that appear to be intelligible when the individual is looking at small characters, or when the user erases a character and replaces it with a small character, making sure that the font is intelligible.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cedar '650 (6256650) in view of Hino '788 (US Pub No 2002/0036788) and Yudasaka '211 (US Pub No 2003/0202211) and Yoshida '634 (USP 5959634).

Re claim 20: Cedar '650 discloses a document printing system (see col. 10, lines 7-9) comprising:

a first calculation unit for calculating a font size based on a scaling factor of an output area (i.e. in the system, the fullness ratio, considered analogous to the scaling factor since it is the ratio of height or width of the editable text and the text frame, is used to determine the theoretical font size in the system. With the font size being scaled based on the fullness ratio, the calculation of the theoretical font size is based on the fullness ratio. The fullness ratio can account for a text frame output area or the

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v. Benson, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

whole amount of the display screen, considered as the output area. The functions of the first calculation unit and other units in the system are performed by the many program modules stored in the drives (110, 113, 114 and 109) that are executed by the CPU (102); see col. 10, lines 36-67, col. 11, line 1 – col. 12, line 47);

a decision unit for deciding whether the font size calculated by said first calculation unit is smaller than a minimum font size or not (i.e. when the system calculates the theoretical font size, the system determines whether this font size is between the maximum and minimum allowed theoretical font sizes. This can apply to a scenario where the theoretical font size can be greater than the max or smaller than the minimum theoretical font size. When the theoretical font size lies outside the range from the max or min, the system adjusts the theoretical font size according to the method in column 20; see col. 16, line 60 – col. 17, line 22 and col. 19, line 13 – col. 20, line 14);

a second calculation unit for calculating an expansion for expanding the font size to the font size (i.e. when the system determines that the theoretical font size is not between the minimum and maximum value allowed, the system either expands the font size if it is lower than the minimum or reduces the size if it is larger than the max, to a size that is halfway between the min and max theoretical values; see figs. 2-5; col. 16, line 60 – col. 17, line 22 and col. 19, line 13 – col. 20, line 14) when said decision unit determines that the font size calculated by said first calculation unit is smaller than the minimum font size (i.e. in the system, the theoretical font size can be determined to be

[4] *In re Bilski,* 88 USPQ2d 1385 (Fed. Cir. 2008).

smaller than the minimum theoretical font size and the font size be magnified to a different size. This is shown in figure 4; see figs. 2-5; col. 16, line 60 – col. 17, line 22 and col. 19, line 13 – col. 20, line 14); and

an adjusting unit for making adjustment to expand the output area based on the expansion calculated by said second calculation unit (i.e. in the system, the area where the characters are output can be resized by the resize height determined by the system. The resize height is used to resize the text frame where the image data is output, considered as the output area; see col. 11, lines 1-12); and

a selection unit for (i) selecting a font in a specified typeface without changing its weight, if the font size is larger than or equal to a first size (i.e. Cedar discloses a system where a font is selected in a certain font face, or typeface, without changing the weight of the font. During the Rich formatting aspect of Cedar, the user can use the system to select a font in a font face and not change the weight of the font by bolding the text and the text can be equal to a first desired size of the user editing the text information; see col. 8, ll. 13-63), (ii) selecting the font in the specified typeface if the font size is smaller than the first size and is larger than or equal to a second size (i.e. if the user is editing text, the user can change the font size of Arial text from its current font size to the smallest font size on the system through Rich formatting. Here the user is able to select a font in a specified type if the font size is smaller than a first size and equal to another font size that the user desires. With the first and second sizes being user defined, the system can perform the above feature; see col. 8, ll. 13-63), and (iii) selecting a font in a certain typeface if the font size is smaller than the second size (i.e.

in the system, since the user is able to select a font in a certain typeface and this font being smaller than a second user defined, or desired size, then the above claim feature can be performed; see col. 8, ll. 13-63).

However, Cedar '650 fails to teach a second calculation unit for calculating an expansion ratio for expanding the font size to the minimum font size and expansion ratio.

However, this is well known in the art as evidenced by Hino '788. Hino '788 discloses a second calculation unit for calculating an expansion ratio for expanding the font size to the minimum font size (i.e. the system of Hino is similar to the system of Cedar in the manner in which both inventions modify character data depending on the size of character data (same field of endeavor). However, shown in figure 24, the size of the characters is determined, which is considered analogous to font size. The minimum of the character sizes are also detected in the system. With the system first detecting that the character is a minimum size of 6 points and secondly detecting that the desired minimum size is 8 point characters that are needed in the document, the system calculates a magnification ratio to apply to the characters to expand the characters to the minimum size of 8 points. The magnification rate is considered to be 8/6; see fig. 24; paragraphs [0172]-[0183]) and expansion ratio (i.e. the magnification ratio is considered as the expansion ratio; paragraphs [0172]-[0183]).

Therefore, in view of Hino '788, it would have been obvious to one of ordinary skill at the time the invention was made to have the functions of a second calculation

unit for calculating an expansion ratio for expanding the font size to the minimum font size and an expansion ratio in order to have a magnification ratio to enlarge the character to the detected minimum character size (as stated in Hino '788 paragraph [0176]).

However, Cedar '650 in view of Hino '788 fails to teach making adjustment to expand the output area into a plurality of pages based on the expansion ratio calculated.

However, this is well known in the art as evidenced by Yudasaka '211. Yudasaka '211 discloses making adjustment to expand the output area into a plurality of pages based on the expansion ratio calculated (i.e. like the previously applied references, the Yudasaka reference is used to enlarge characters based on character size information (same field of endeavor). However, shown in figures 13a-c are examples of an output area being expanded into a plurality of pages based on a magnification K, which is registered as a ratio of enlargement in the process of converting master image data into the size of the printing image as the output. Depending on the components SAx, SAy with the other components SBx, SBy, determines how many pages the master image data is extends onto printing image pages. With a favorable ratio of the above components that makeup the magnification K, the master image data can expand over a large amount of the output area, which can be comprised of a plurality of pages (i.e. shown in fig. 13A), or the image data can be over a large area on one page (i.e. shown in fig. 11); see figs. 8-13; paragraphs [0066]-[0074]).

Therefore, in view of Yudasaka '211, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of making adjustment to expand the output area into a plurality of pages based on the expansion ratio calculated incorporated in the device of Cedar '650, as modified by features of Hino '788, in order to have image data magnified by a predetermined magnification and to have printing page image data of a greater size than the size of the printing paper actually used for printing (as stated in Yudasaka '211 paragraph [0007]).

However, the combination of Cedar '650, Hino '788 and Yudasaka '211 fails to specifically teach a selection unit for (ii) selecting the font with the thinnest weight in the specified typeface, and (iii) selecting a font in a certain typeface regardless of the specified typeface.

However, this is well known in the art as evidenced by Yoshida '634. Yoshida '634 discloses (ii) selecting the font with the thinnest weight in the specified typeface (i.e. in the system of Yoshida '634, like the Cedar system, the character information in a file or document can be modified or edited (same field of endeavor). However, in Yoshida, the system discloses choosing the font with the thinnest weight in the specified typeface when the user chooses a font typeface with the designated typeface of a font having a larger weight than a presently stored font. The system will then select the font with the smaller weight stored in the system. In this case, if the user designates Standard-4 in the Ming font in figure 23A, the system automatically selects the Standard-Thin 3, which is the thinnest weight font stored in the system within the Ming

typeface. Therefore, the above claim feature is performed by the Yoshida reference; see col. 10, ll. 59 – col. 12, ll. 3), and

(iii) selecting a font in a certain typeface regardless of the specified typeface (i.e. in the system of Yoshida, the system is directed by a user to select a certain font with a certain style or typeface. However, if the system does not have that specific font style with the specific weight, the system selects another font style that is thicker or thinner than what was selected by the user; see col. 10, ll. 59 – col. 12, ll. 3).

Therefore, in view of Yoshida '634, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of a selection unit for a selection unit for (ii) selecting the font with the thinnest weight in the specified typeface, and (iii) selecting a font in a certain typeface regardless of the specified typeface, incorporated in the device of Cedar '650, as modified by the features of Hino '788 and Yudasaka '211 in order to generate different weight data for a font style (as stated in Yoshida '634 col. 1, ll. 31-36).

8. Claims 24 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cedar '650 (6256650) in view of Hino '788 (US Pub No 2002/0036788) and Yudasaka '211 (US Pub No 2003/0202211).

Re claim 24: Cedar '650 discloses a document printing method (see col. 10, lines 7-9) comprising:

a first calculation step for calculating a font size based on a scaling factor of an output area (i.e. in the system, the fullness ratio, considered analogous to the scaling factor since it is the ratio of height or width of the editable text and the text frame, is used to determine the theoretical font size in the system. With the font size being scaled based on the fullness ratio, the calculation of the theoretical font size is based on the fullness ratio. The fullness ratio can account for a text frame output area or the whole amount of the display screen, considered as the output area. The functions of the first calculation unit and other units in the system are performed by the many program modules stored in the drives (110, 113, 114 and 109) that are executed by the CPU (102); see col. 10, lines 36-67, col. 11, line 1 – col. 12, line 47);

a decision step for deciding whether the font size calculated by said first calculation step is smaller than a minimum font size or not (i.e. when the system calculates the theoretical font size, the system determines whether this font size is between the maximum and minimum allowed theoretical font sizes. This can apply to a scenario where the theoretical font size can be greater than the max or smaller than the minimum theoretical font size. When the theoretical font size lies outside the range from the max or min, the system adjusts the theoretical font size according to the method in column 20; see col. 16, line 60 – col. 17, line 22 and col. 19, line 13 – col. 20, line 14);

a second calculation step for calculating an expansion for expanding the font size to the font size (i.e. when the system determines that the theoretical font size is not between the minimum and maximum value allowed, the system either expands the font

size if it is lower than the minimum or reduces the size if it is larger than the max, to a size that is halfway between the min and max theoretical values; see figs. 2-5; col. 16, line 60 – col. 17, line 22 and col. 19, line 13 – col. 20, line 14) when said decision step determines that the font size calculated by said first calculation step is smaller than the minimum font size (i.e. in the system, the theoretical font size can be determined to be smaller than the minimum theoretical font size and the font size be magnified to a different size. This is shown in figure 4; see figs. 2-5; col. 16, line 60 – col. 17, line 22 and col. 19, line 13 – col. 20, line 14); and

an adjusting step for making adjustment to expand the output area based on the expansion calculated by said second calculation step (i.e. in the system, the area where the characters are output can be resized by the resize height determined by the system. The resize height is used to resize the text frame where the image data is output, considered as the output area; see col. 11, lines 1-12); and

a selection step for selecting a font so that small characters are replaced so that their typefaces become intelligible and smaller characters are replaced by most intelligible characters (i.e. the user can change the properties of text such as the font face, or typeface. The user can have a 4pt font during the Rich formatting and replace the current typeface with the most intelligible typeface available; see col. 8, ll. 13-63),

wherein the steps are performed by a document printing system (i.e. the system edits or modifies a document and the document is prepared to be output by a printer; see col. 9, ll. 65- col. 10, ll. 21).

However, Cedar '650 fails to teach a second calculation step for calculating an expansion ratio for expanding the font size to the minimum font size and expansion ratio.

However, this is well known in the art as evidenced by Hino '788. Hino '788 discloses a second calculation step for calculating an expansion ratio for expanding the font size to the minimum font size (i.e. the system of Hino is similar to the system of Cedar in the manner in which both inventions modify character data depending on the size of character data (same field of endeavor). However, shown in figure 24, the size of the characters is determined, which is considered analogous to font size. The minimum of the character sizes are also detected in the system. With the system first detecting that the character is a minimum size of 6 points and secondly detecting that the desired minimum size is 8 point characters that are needed in the document, the system calculates a magnification ratio to apply to the characters to expand the characters to the minimum size of 8 points. The magnification rate is considered to be 8/6; see fig. 24; paragraphs [0172]-[0183]) and expansion ratio (i.e. the magnification ratio is considered as the expansion ratio; paragraphs [0172]-[0183]).

Therefore, in view of Hino '788, it would have been obvious to one of ordinary skill at the time the invention was made to have the method step of a second calculation step for calculating an expansion ratio for expanding the font size to the minimum font size and an expansion ratio in order to have a magnification ratio to enlarge the character to the detected minimum character size (as stated in Hino '788 paragraph [0176]).

However, Cedar '650 in view of Hino '788 fails to teach making adjustment to expand the output area into a plurality of pages based on the expansion ratio calculated.

However, this is well known in the art as evidenced by Yudasaka '211. Yudasaka '211 discloses making adjustment to expand the output area into a plurality of pages based on the expansion ratio calculated (i.e. like the previously applied references, the Yudasaka reference is used to enlarge characters based on character size information (same field of endeavor). However, shown in figures 13a-c are examples of an output area being expanded into a plurality of pages based on a magnification K, which is registered as a ratio of enlargement in the process of converting master image data into the size of the printing image as the output. Depending on the components SAx, SAy with the other components SBx, SBy, determines how many pages the master image data is extends onto printing image pages. With a favorable ratio of the above components that makeup the magnification K, the master image data can expand over a large amount of the output area, which can be comprised of a plurality of pages (i.e. shown in fig. 13A), or the image data can be over a large area on one page (i.e. shown in fig. 11); see figs. 8-13; paragraphs [0066]-[0074]).

Therefore, in view of Yudasaka '211, it would have been obvious to one of ordinary skill at the time the invention was made to have the method step of making adjustment to expand the output area into a plurality of pages based on the expansion ratio calculated incorporated in the device of Cedar '650, as modified by features of

Hino '788, in order to have image data magnified by a predetermined magnification and to have printing page image data of a greater size than the size of the printing paper actually used for printing (as stated in Yudasaka '211 paragraph [0007]).

Re claim 28: Cedar '650 discloses a computer-readable medium storing thereon a computer program for instructing a computer to execute a method for document printing (see col. 10, lines 7-9) comprising:

a first calculation step for calculating a font size based on a scaling factor of an output area (i.e. in the system, the fullness ratio, considered analogous to the scaling factor since it is the ratio of height or width of the editable text and the text frame, is used to determine the theoretical font size in the system. With the font size being scaled based on the fullness ratio, the calculation of the theoretical font size is based on the fullness ratio. The fullness ratio can account for a text frame output area or the whole amount of the display screen, considered as the output area. The functions of the first calculation unit and other units in the system are performed by the many program modules stored in the drives (110, 113, 114 and 109) that are executed by the CPU (102); see col. 10, lines 36-67, col. 11, line 1 – col. 12, line 47);

a decision step for deciding whether the font size calculated by said first calculation step is smaller than a minimum font size or not (i.e. when the system calculates the theoretical font size, the system determines whether this font size is between the maximum and minimum allowed theoretical font sizes. This can apply to a

scenario where the theoretical font size can be greater than the max or smaller than the minimum theoretical font size. When the theoretical font size lies outside the range from the max or min, the system adjusts the theoretical font size according to the method in column 20; see col. 16, line 60 – col. 17, line 22 and col. 19, line 13 – col. 20, line 14);

a second calculation step for calculating an expansion for expanding the font size to the font size (i.e. when the system determines that the theoretical font size is not between the minimum and maximum value allowed, the system either expands the font size if it is lower than the minimum or reduces the size if it is larger than the max, to a size that is halfway between the min and max theoretical values; see figs. 2-5; col. 16, line 60 – col. 17, line 22 and col. 19, line 13 – col. 20, line 14) when said decision step determines that the font size calculated by said first calculation step is smaller than the minimum font size (i.e. in the system, the theoretical font size can be determined to be smaller than the minimum theoretical font size and the font size be magnified to a different size. This is shown in figure 4; see figs. 2-5; col. 16, line 60 – col. 17, line 22 and col. 19, line 13 – col. 20, line 14); and

an adjusting step for making adjustment to expand the output area based on the expansion calculated by said second calculation step (i.e. in the system, the area where the characters are output can be resized by the resize height determined by the system. The resize height is used to resize the text frame where the image data is output, considered as the output area; see col. 11, lines 1-12); and

a selection step for selecting a font so that small characters are replaced so that their typefaces become intelligible and smaller characters are replaced by most intelligible characters (i.e. the user can change the properties of text such as the font face, or typeface. The user can have a 4pt font during the Rich formatting and replace the current typeface with the most intelligible typeface available; see col. 8, ll. 13-63).

However, Cedar '650 fails to teach a second calculation step for calculating an expansion ratio for expanding the font size to the minimum font size and expansion ratio.

However, this is well known in the art as evidenced by Hino '788. Hino '788 discloses a second calculation step for calculating an expansion ratio for expanding the font size to the minimum font size (i.e. the system of Hino is similar to the system of Cedar in the manner in which both inventions modify character data depending on the size of character data (same field of endeavor). However, shown in figure 24, the size of the characters is determined, which is considered analogous to font size. The minimum of the character sizes are also detected in the system. With the system first detecting that the character is a minimum size of 6 points and secondly detecting that the desired minimum size is 8 point characters that are needed in the document, the system calculates a magnification ratio to apply to the characters to expand the characters to the minimum size of 8 points. The magnification rate is considered to be 8/6; see fig. 24; paragraphs [0172]-[0183]) and expansion ratio (i.e. the magnification ratio is considered as the expansion ratio; paragraphs [0172]-[0183]).

Therefore, in view of Hino '788, it would have been obvious to one of ordinary skill at the time the invention was made to have the method step of a second calculation step for calculating an expansion ratio for expanding the font size to the minimum font size and an expansion ratio in order to have a magnification ratio to enlarge the character to the detected minimum character size (as stated in Hino '788 paragraph [0176]).

However, Cedar '650 in view of Hino '788 fails to teach making adjustment to expand the output area into a plurality of pages based on the expansion ratio calculated.

However, this is well known in the art as evidenced by Yudasaka '211. Yudasaka '211 discloses making adjustment to expand the output area into a plurality of pages based on the expansion ratio calculated (i.e. like the previously applied references, the Yudasaka reference is used to enlarge characters based on character size information (same field of endeavor). However, shown in figures 13a-c are examples of an output area being expanded into a plurality of pages based on a magnification K, which is registered as a ratio of enlargement in the process of converting master image data into the size of the printing image as the output. Depending on the components SAx, SAy with the other components SBx, SBy, determines how many pages the master image data is extends onto printing image pages. With a favorable ratio of the above components that makeup the magnification K, the master image data can expand over a large amount of the output area, which can be comprised of a plurality of pages (i.e. shown in fig. 13A), or the image data can be

over a large area on one page (i.e. shown in fig. 11); see figs. 8-13; paragraphs [0066]-[0074]).

Therefore, in view of Yudasaka '211, it would have been obvious to one of ordinary skill at the time the invention was made to have the program step of making adjustment to expand the output area into a plurality of pages based on the expansion ratio calculated incorporated in the device of Cedar '650, as modified by features of Hino '788, in order to have image data magnified by a predetermined magnification and to have printing page image data of a greater size than the size of the printing paper actually used for printing (as stated in Yudasaka '211 paragraph [0007]).

9. Claims 21 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cedar '650, as modified by Hino '788, Yudasaka '211 and Yoshida '634, as applied to claim 20, above, and further in view of Hertzfeld '824 (USP 6441824).

Re claim 21: The teachings of Cedar '650 in view of Hino '788, Yudasaka '211 and Yoshida '634 are disclosed above.

However, Cedar '650 in view of Hino '788 and Yudasaka '211 fails to teach the document printing system as claimed in claim 20, further comprising a changing unit for changing a font type according to the font size.

However, this is well known in the art as evidenced by Hertzfeld '824. Hertzfeld '824 discloses further comprising a changing unit for changing a font type according to the font size (i.e. in the system, the changing of the font type can occur in addition to

changing the font size. Both the font type and size can be varied depending on which combination of the two attributes fits the display area available; see col. 1, line 45 – col. 2, line 2 and col. 4, lines 3-50).

Therefore, in view of Hertzfeld '824, it would have been obvious to one of ordinary skill at the time the invention was made to have a changing unit for changing a font type according to the font size in order to find a combination of the font size and type that allows information to fit within the display area available (as stated in Hertzfeld '824 col. 4, lines 43-50).

Re claim 32: The teachings of Cedar '650 in view of Hino '788, Yudasaka '211 and Yoshida '634 are disclosed above.

However, Cedar '650 in view of Hino '788 and Yudasaka '211 fails to teach the document printing system as claimed in claim 21, wherein said certain font includes Gothic.

However, this is well known in the art as evidenced by Hertzfeld '824. Hertzfeld '824 discloses wherein said certain font includes Gothic (i.e. mentioned in column 4, lines 47-50, the reference states that font type can be changed to gothic).

Therefore, in view of Hertzfeld '824, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of wherein said certain font includes Gothic in order to find a combination of the font size and type that

allows information to fit within the display area available (as stated in Hertzfeld '824 col. 4, lines 43-50).

10. Claims 25, 29, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cedar '650, as modified by Hino '788, and Yudasaka '211, as applied to claims 24 and 28 above, and further in view of Hertzfeld '824 (USP 6441824).

Re claim 25: The teachings of Cedar '650 in view of Hino '788, and Yudasaka '211 are disclosed above.

However, Cedar '650 in view of Hino '788 and Yudasaka '211 fails to teach the document printing method as claimed in claim 24, further comprising a changing step for changing a font type according to the font size.

However, this is well known in the art as evidenced by Hertzfeld '824. Hertzfeld '824 discloses further comprising a changing step for changing a font type according to the font size (i.e. in the system, the changing of the font type can occur in addition to changing the font size. Both the font type and size can be varied depending on which combination of the two attributes fits the display area available; see col. 1, line 45 – col. 2, line 2 and col. 4, lines 3-50).

Therefore, in view of Hertzfeld '824, it would have been obvious to one of ordinary skill at the time the invention was made to have method step of a changing step for changing a font type according to the font size in order to find a combination of

the font size and type that allows information to fit within the display area available (as stated in Hertzfeld '824 col. 4, lines 43-50).

Re claim 29: The teachings of Cedar '650 in view of Hino '788 and Yudasaka '211 are disclosed above.

However, Cedar '650 in view of Hino '788 and Yudasaka '211 fails to teach the computer-readable medium as claimed in claim 28, wherein the method further comprises a changing step for changing a font type according to the font size.

However, this is well known in the art as evidenced by Hertzfeld '824. Hertzfeld '824 discloses wherein the method further comprises a changing step for changing a font type according to the font size (i.e. in the system, the changing of the font type can occur in addition to changing the font size. Both the font type and size can be varied depending on which combination of the two attributes fits the display area available; see col. 1, line 45 – col. 2, line 2 and col. 4, lines 3-50).

Therefore, in view of Hertzfeld '824, it would have been obvious to one of ordinary skill at the time the invention was made to have the method step of wherein the method further comprises a changing step for changing a font type according to the font size in order to find a combination of the font size and type that allows information to fit within the display area available (as stated in Hertzfeld '824 col. 4, lines 43-50).

Re claim 33: The teachings of Cedar '650 in view of Hino '788 and Yudasaka '211 are disclosed above.

However, Cedar '650 in view of Hino '788 and Yudasaka '211 fails to teach the document processing method as claimed in claim 25, wherein the certain font includes Gothic.

However, this is well known in the art as evidenced by Hertzfeld '824. Hertzfeld '824 discloses wherein the certain font includes Gothic (i.e. mentioned in column 4, lines 47-50, the reference states that font type can be changed to gothic).

Therefore, in view of Hertzfeld '824, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of wherein the certain font includes Gothic in order to find a combination of the font size and type that allows information to fit within the display area available (as stated in Hertzfeld '824 col. 4, lines 43-50).

Re claim 34: The teachings of Cedar '650 in view of Hino '788 and Yudasaka '211 are disclosed above.

However, Cedar '650 in view of Hino '788 and Yudasaka '211 fails to teach the computer-readable medium as claimed in claim 29, wherein the certain font includes Gothic.

However, this is well known in the art as evidenced by Hertzfeld '824. Hertzfeld '824 discloses wherein the certain font includes Gothic (i.e. mentioned in column 4, lines 47-50, the reference states that font type can be changed to gothic).

Therefore, in view of Hertzfeld '824, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of wherein the certain font includes Gothic in order to find a combination of the font size and type that allows information to fit within the display area available (as stated in Hertzfeld '824 col. 4, lines 43-50).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Miura '831 (USP 6081831) discloses a system where text data detected is compared to a font size to see if it is above or below a minimum font size. The system then calculates a magnification ratio to magnify the font if it is smaller than the minimum font size.

13. Asada '987 (USP 5825987) discloses a system for a character output device that considers the weight and other similarities between a chosen font and available fonts in order to use a font for printing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAD DICKERSON whose telephone number is

(571)270-1351. The examiner can normally be reached on 9:30-6:00pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Haskins can be reached on (571) 272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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